

another in the AVA Academia series...



# The Fundamentals of Interior Architecture

John Coles & Naomi House

---

# **The Fundamentals of Interior Architecture**

## **John Coles/Naomi House**

---

An AVA Book  
Published by AVA Publishing SA  
Rue des Fontenailles 16  
Case Postale  
1000 Lausanne 6  
Switzerland  
Tel: +41 786 005 109  
Email: [enquiries@avabooks.ch](mailto:enquiries@avabooks.ch)

Distributed by Thames & Hudson (ex-North America)  
181a High Holborn  
London WC1V 7QX  
United Kingdom  
Tel: +44 20 7845 5000  
Fax: +44 20 7845 5055  
Email: [sales@thameshudson.co.uk](mailto:sales@thameshudson.co.uk)  
[www.thamesandhudson.com](http://www.thamesandhudson.com)

Distributed in the USA and Canada by:  
Ingram Publisher Services Inc.  
1 Ingram Blvd.  
La Vergne, TN 37086  
USA  
Tel: +1 866 400 5351  
Fax: +1 800 838 1149  
Email: [customer.service@ingrampublisherservices.com](mailto:customer.service@ingrampublisherservices.com)

English Language Support Office  
AVA Publishing (UK) Ltd.  
Tel: +44 1903 204 455  
Email: [enquiries@avabooks.co.uk](mailto:enquiries@avabooks.co.uk)

Copyright © AVA Publishing SA 2007

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without permission of the copyright holder.

ISBN 978-2-940373-38-3

10 9 8 7 6 5 4 3 2

Design by Gavin Ambrose  
[www.gavinambrose.co.uk](http://www.gavinambrose.co.uk)

Production by  
AVA Book Production Pte. Ltd., Singapore  
Tel: +65 6334 8173  
Fax: +65 6259 9830  
Email: [production@avabooks.com.sg](mailto:production@avabooks.com.sg)

All reasonable attempts have been made to trace, clear and credit the copyright holders of the images reproduced in this book. However, if any credits have been inadvertently omitted, the publisher will endeavour to incorporate amendments in future editions.

Cover image © photobank.ch



# The Fundamentals of Interior Architecture



**John Coles/Naomi House**

contents

0

**Introduction**

How to get the most  
out of this book 6  
Introduction 8

1

**SPACE/form**

Space & place 16  
Elements & composition  
of interior space 24

2

**SITE/function**

Analysing the site 46  
Types of interior 58



## 3

**MATERIALS/texture**

Understanding the interior	78
Selecting materials	88
Perception of quality	98
Architectural materials	108

## 4

**LIGHT/mood**

Understanding light	120
Using light	130
Calculating light	142

## 5

**PRESENTATION/  
representation**

Key stages in design	148
Representing design	154

## 6

**Conclusion**

Conclusion	170
Sources of information and inspiration	172
Buildings of interest	173
Index	174
Acknowledgements and credits	176



# how to get the most out of this book



SPACE/form 14/15

There is no limit to the type or size of building that can fall within the practice of the interior architect and, equally, no limit to the range of activities which they may design. This chapter will explore the way in which the existing building affects the designer's response to the client's brief and will identify the devices used by the designer in order to achieve the appropriate spatial and functional experience.

1

## Chapters

Each chapter opens with an introductory spread containing a brief precis and image.

## Navigation

Chapter titles are shown in the top-left of every spread, page numbers in the right. Sub-section titles are also shown at the bottom-right of each spread.

## Section openers

Each sub-section opens with a list of topics to be covered and a brief introductory text.

the fundamentals of interior architecture  
**SPACE/form**

elements & composition of interior space

24/25

**in this section**  
plane / scale / proportion / vista / movement / transition / accessibility

The following section introduces the elements, and the vocabulary used to describe them, that are key to the creation and understanding of interior architecture. These elements can be used to express the character and quality of the interior, and used either individually or as a combination, will impart atmosphere and personality.

**plane**  
The plane is the most fundamental element of interior architecture. Essentially a two-dimensional form, it serves, when employed as floors, walls and ceilings, to enclose and define space. Smaller planar elements contribute doors, stairs and other interior elements such as shelves and furniture. As well as enclosing and modulating space, the plane becomes the carrier of the required material, texture and colour qualities of the interior as well as, by absorption or reflection, controlling acoustic and lighting values.

The absence of a plane, or the perforation of one, may be used to direct attention to some other part of the site or interior as well as permitting physical movement and the passage of light, air and sound.

The realities of construction mean that built planes have thickness. How much of that thickness is visible (or, indeed, whether it is accentuated for aesthetic purposes) is a judgement for the designer to make. In traditional architecture the massive materials employed ensure that, where visible, the edge of the plane will have substantial thickness, but the advent of new materials and processes permits slimmer structures and this slimmness is often used as an expression of modernity. A building providing excellent illustration of the expressive use of planar structures is Schröder House. Designed by Gerrit Rietveld it reads, both inside and out, as a series of independent slim planar elements, virtually hovering in space.



Thomas Cook, Accoroblu, view of restaurant at office floor level

London, London, UK  
2007-2010  
Interior Architect  
© 2011  
The meeting environment for Thomas Cook Holdings uses planar elements to define space, separating one activity from another while the perforation gives clarity as to what lies behind the plane. Photograph courtesy of Peter Sumner

elements & composition of interior space

the fundamentals of interior architecture  
**SPACE/form**

Le Corbusier claimed that 'a stair separates – a ramp connects', and it is certainly true that the ramp contains possibilities of flow and gentle transition that the fundamentally jerky movement (both visually and practically) of the staircase finds difficult to embody. Like all architectural devices the ramp has both pragmatic and aesthetic qualities that have been employed in different proportions for different reasons throughout history. The important point about ramps is that to be effortless in use they need to be shallow, but being shallow means that they need to be lengthy, and it is often difficult in real-world situations to accommodate that length. In the case of Richard Meier, who has used ramps more consistently than any other contemporary architect, a significant proportion of the building volume is devoted to ramp access (look at the Museum of Contemporary Art in Barcelona and the Museum of Decorative Arts in Frankfurt). Many years earlier Frank Lloyd Wright had adopted a different approach when creating the Guggenheim Museum in New York by winding the ramp into a spiral

around a hollow, cone-shaped void. In doing so he created a system that was both gallery space and access system and which, while presenting problems to exhibition curators ever since, created an iconic building.

Escalators and lifts work slightly differently. Glass lifts, particularly those climbing the external facade, are no longer a novelty but still have a powerful appeal. In many ways the escalator provides a composite of the experience of lift, ramp and stair because of its self-propelled trajectory, but so often the form and materials of the device itself and the awkward transition between human and mechanical propulsion at the beginning and end of the journey are less than satisfactory. However, here too glass is playing an increasing role in diminishing the slab-sided aspect of the traditional installation so that one hopes that in the not-too-distant future the sculptural form will achieve the refinement that it deserves.



36/37

**London Loft, staircase view**  
**lifts**  
Photograph by JAMES MORIS  
© 2014  
This is a reproduction of the original photograph. It is provided as a guide to the book. Photograph by James Morris  
© 2014  
This is a reproduction of the original photograph. It is provided as a guide to the book.

'I strive for an architecture from which nothing can be taken away.'  
Helmut Jahn

**Frank Lloyd Wright (USA)**  
1867-1959  
Notable projects:  
Fallingwater, Pennsylvania, USA  
Guggenheim Museum, New York, USA  
Prairie School, Chicago, USA  
In the 1930s in Europe, Wright's frequently cited with installing the 'box away from angle function, box-like room facing to a more complex shared space concept. Using simple materials, he experimented with screening devices, subtle changes in ceiling height and railing panel elements in order to create 'weightless' interior spaces. He was also instrumental in the move to begin producing and building. The Frank Lloyd Wright Foundation now exists to conserve the work of the architect and advance the organic method of architecture and building that he promoted.

**Quotations**  
Quotations from well-known interior architects and designers are used to put content into context.

**Architect biographies**  
Throughout the book, the reader can find out about the work of practising architects and designers who have contributed to the subject of interior architecture.

**Questions in summary**  
Each sub-section ends with a selection of questions, designed to summarise what has just been discussed.

the fundamentals of interior architecture  
**questions in summary**

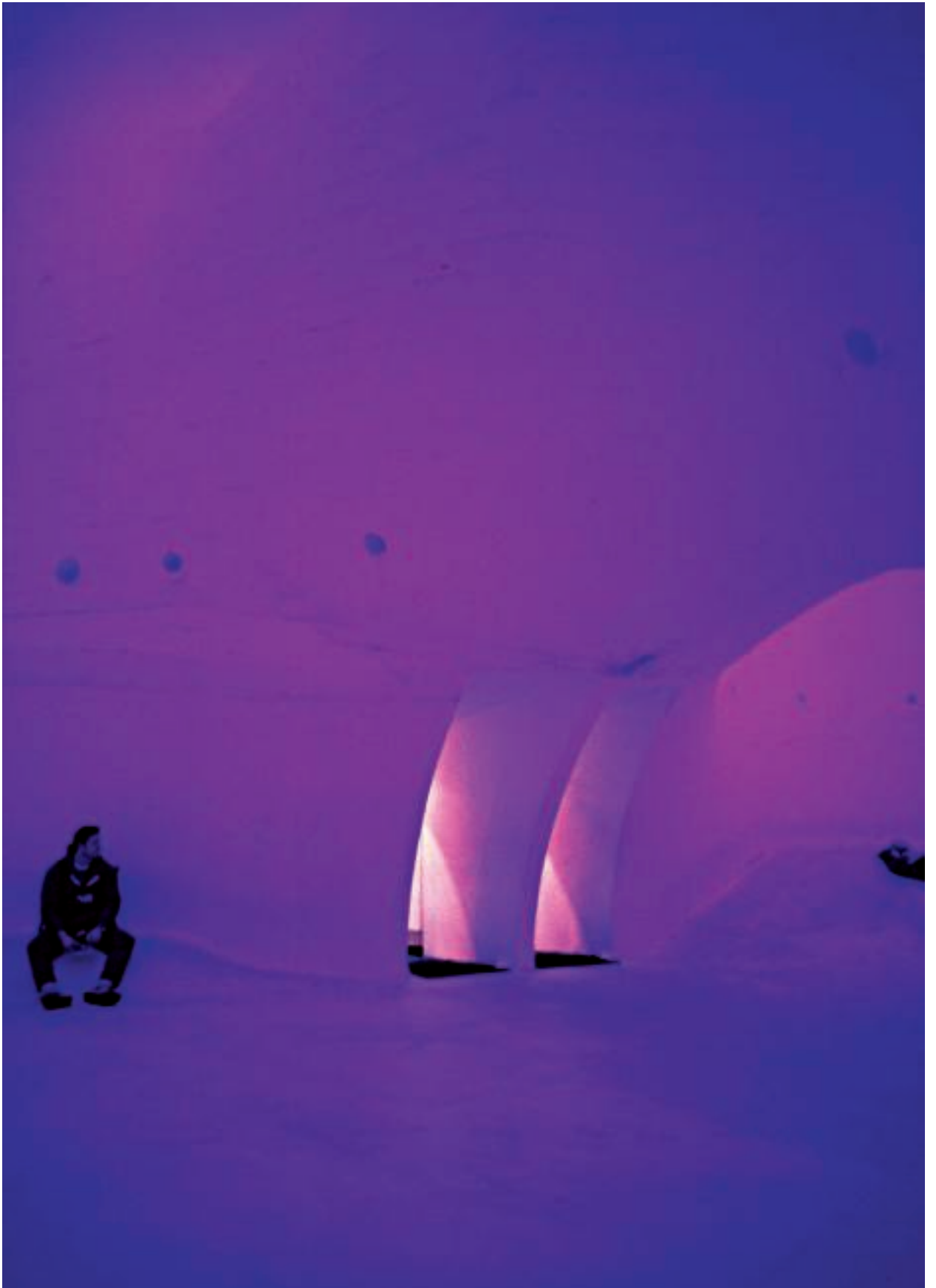
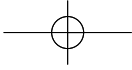
116/117

questions in summary  
**architectural materials**

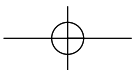
1 2 3 4 5 6 7 8

<p>What range of materials and finishes are available to the interior architect?</p>	<p>To what elements does timber lend itself well?</p>	<p>What sort of environment does stone and marble create?</p>	<p>How can the interior architect make use of concrete and terrazzo?</p>	<p>What sort of responses can metallic materials invoke?</p>	<p>For what elements might glass be suitable?</p>	<p>What range of plastics is available to the interior architect?</p>	<p>How can the choice of fabric create coloured, textures and patterned effects?</p>
--	---	---	--	--	---	---	--





introduction



Open the door of any building, in any part of the world, and enter. As you do so you will be aware that, with no conscious effort on your part, you experience a response to the space beyond the door. Subsequent responses may reinforce or modify that first one. These sensations are not accidental. They are the result of the senses (sight, sound, smell and touch) conveying messages to the brain, which analyses them with reference to previous experience, to a sense of balance and proportion and to a psychological (and often very personal) reaction to the stimuli of light, colour and acoustics.

It is these sensations that the effective designer orchestrates in the design of interiors and which we experience when we enter them. Of course there is more to this than generating a theatrical experience. Using the skills and understanding borne of study and practice, the designer is endeavouring to create an environment that not only feels appropriate, but also functions in a way that supports the needs of its users.

The term 'interior architecture' emerged in the 1970s as the description of a discipline that employs architectural theory, history and principles in the design and creation of interior space. Its growth was in part due to a perception that by employing the rigour of architectural thinking together with the sensory understanding of interior design, a synthesis could be produced that was both intellectually and humanistically satisfying, and which overcame the narrow specialisms of façade-driven architecture and context-free interior design that were prevalent at that time.

At a more pragmatic level, the use of the term 'interior architecture' is a response to the uncertainties inherent in the title 'interior design'. These uncertainties have been accentuated by the increasing use, in magazine articles and television makeover programmes, to describe the process of choosing curtains, furnishings and surface treatments: activities which might be better titled 'interior decoration'.

Over the course of the last thirty years the title 'interior architecture' has acquired a growing acceptance and an increasing sense of identity. That identity is distinguished by the following ideas:

- It acknowledges and respects the enclosing structure and its context as initiators of design strategies.
- It is an activity that is involved in the manipulation and enjoyment of three-dimensional space.
- It employs the sensory stimuli of sound, touch, smell and sight as essential parts of the interior experience.
- It recognises light as a medium for defining space, creating effect and producing well-being.
- It employs materials and colour as integral components of the designed environment.

## **Millennium Dome, rest zone (facing page)**

Location: London, UK

Date: 2000

Designer: Richard Rogers

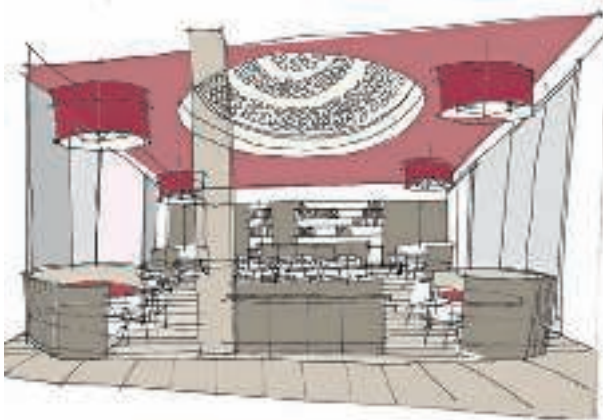
Not all designed spaces have a particular function. The form, colour and light quality of this space combine to create a meditative experience with which the user can connect both physically and emotionally.

*Photograph courtesy of Jonathan Mortimer*

**introduction**

In terms of philosophy and practice interior architecture is a discipline that is heavily (although not exclusively) involved with the remodelling and repurposing of existing buildings and so has an important role to play in the sustainable reuse of the built environment. This reuse finds expression in an enormously wide range of buildings and activities. There is no building, however grand or humble, that is exempt from the interior architect's portfolio. Palaces, hotels, airports, offices, department stores, restaurants, railway stations, corner shops and apartments all offer the opportunity to reformulate, update and improve living and working environments. To undertake this work requires an ability to analyse the existing building and its environs, to understand the needs of the client and the wider society and to generate a concept and a design that creates a synergetic relationship between these elements.

The role of the interior architect will vary from practitioner to practitioner and from commission to commission. It will involve understanding and interpreting the needs of a client, who may be an individual, a public organisation or a commercial business, and creating a collaboration with other professionals: architects, structural engineers, craftsmen, quantity surveyors, heating and ventilation engineers among others, to develop a creative response to those needs and to oversee their translation from a concept to a built reality. During this process the interior architect will be responsible for specifying and documenting the myriad decisions and activities required by the building process and will ensure the fulfilment of legal and regulatory obligations. All these things add up to a demanding professional life; but a life in which one is uniquely able to make a real difference to the conditions and experiences of people in their day-to-day lives.



**Cuckoo Club, concept sketch (left)**

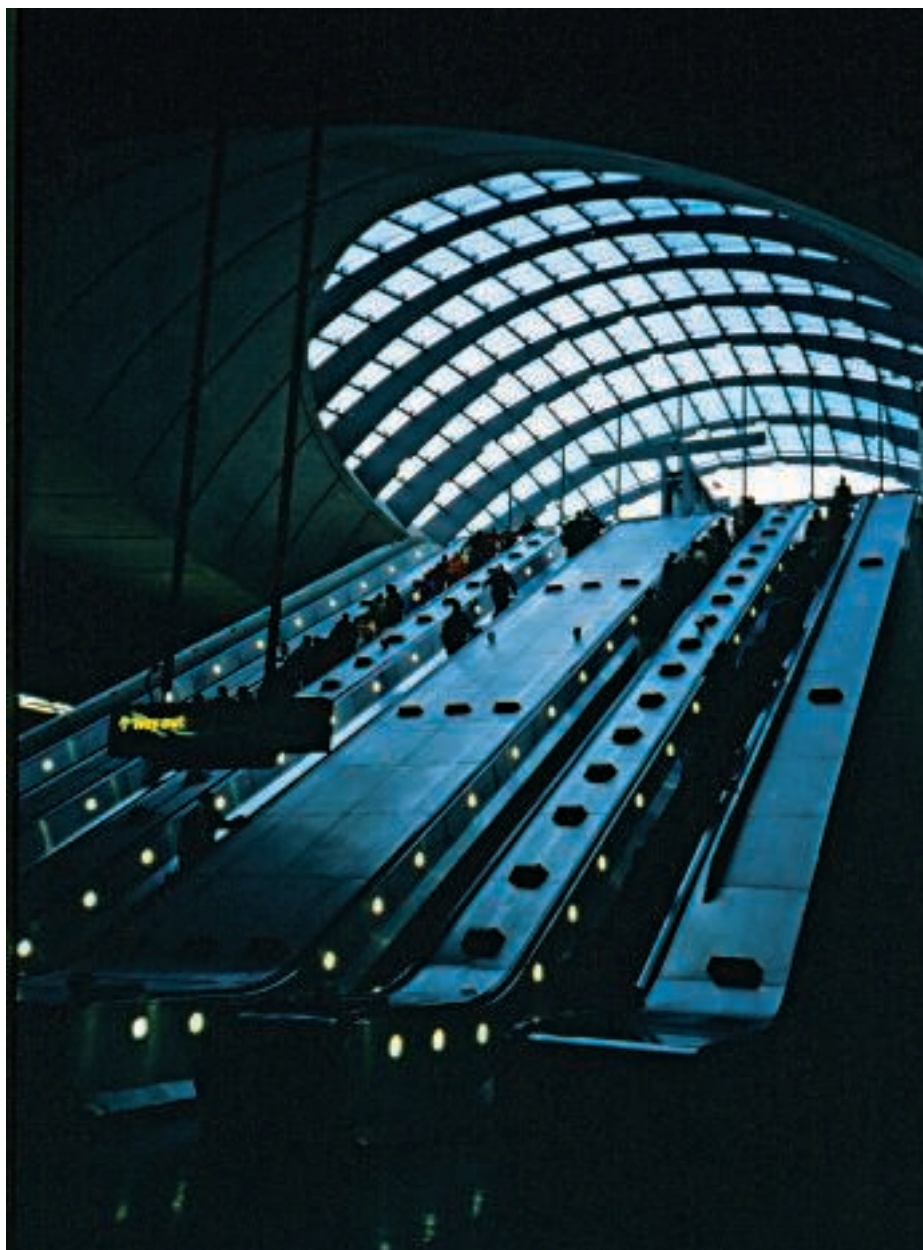
Location: London, UK

Date: 2005

Designer: Blacksheep

A design concept is arrived at once a design brief has been created, and the designer has begun to research the existing building and its context. A design concept is an expression of the key ideas with which the designer intends to work in order to generate a scheme. The image on the left would have been presented to the client in order to communicate the design intentions, and begins to express decisions that have been made about the relationship between form and materials.

*Photograph courtesy of Blacksheep*

**Canary Wharf Underground station (left)**

Location: London, UK

Date: 2000

Designer: Foster + Partners

Interior spaces are not always domestic in scale. The cathedral-like quality of Canary Wharf Underground Station celebrates the movement from the subterranean environment of the station platform to the light at ground level.

*Photograph courtesy of Jonathan Mortimer*



the fundamentals of interior architecture  
introduction



**MBAM (Marble Bar Asset Management) trade floor,  
reception (facing page)**

Location: London, UK

Date: 2004

Designer: Blacksheep

Designers continually explore the relationship between the overall design statement that they are making, and the detailed design of individual components of a scheme. The image shown here describes a clean, minimal approach to space and form with no superfluous detail – an approach that is evident both in the formal relationship between key elements and in the treatment of the materials themselves. Note the junction between floor finish and glazed room, and also between the reception desk and its glass top.

*Photograph by Francesca Yorke, provided courtesy of Blacksheep*

Each chapter in this book introduces and examines the key ideas and processes involved in the practice of interior architecture; describing not only the practical goals and activities but the values and meanings that are incorporated within, and conveyed by, design decisions.

As well as skills and understanding the book introduces the descriptive and technical vocabulary used by the professional designer.

Throughout the book we use the term interior architect as the generic description for someone who practices interior architecture; but it is important to say that not all interior architecture is produced by interior architects. Indeed there are parts of the world, and the United Kingdom is one, where, because of legal limitations on the word architect, there can be no such professional title. Historically, what we would today recognise as interior architecture has been produced by enlightened architects and designers who worked to the principles of the discipline long before they were formally defined, and this continues to be the case today.

'I see architecture not as Gropius did,  
as a moral venture, as truth, but as  
invention, in the same way that poetry  
or music or painting is invention.'

Michael Graves



There is no limit to the type or size of building that can fall within the practice of the interior architect and, equally, no limit to the range of activities which they may design. This chapter will explore the way in which the existing building affects the designer's response to the client's brief and will identify the devices used by the designer in order to achieve the appropriate spatial and functional experience.





the fundamentals of interior architecture

## SPACE/form

# space & place

### in this section

understanding the sense of place / building reuse

In his writings, Le Corbusier identifies the idea of the *tabula rasa* – the blank slate on which design and experience may be written. In particular he pinpoints the concept of starting from nothing and generating a sense of place. Place refers to a particular point in space – one that has either singular or multiple identities, and is often a space that comprises a particular relationship between architecture and site. In recent times it has become increasingly important for us to identify ourselves with the spaces that we occupy and use, and to understand them both physically and emotionally.

#### understanding the sense of place

Places are spaces with meaning and that meaning is often constructed through time, so that history is seen to be necessary in the creation of place. That history might be accessible to a wide audience or it might be intimate and individual – Trafalgar Square engenders a sense of place that we can all understand in terms of power, but the sense of place that you experience when you walk down the street where you lived as a child may only be understood by you. A sense of place therefore can be both constructed (as in Trafalgar Square) and personal – and these experiences can often overlap.

Understanding the sense of place engendered in a building and its spatial context is an essential aspect of the design process. Very occasionally an architect may be involved in developing from a blank slate in the Corbusian sense; but the interior architect – never. The interior architect's role is to transform, to repurpose: to breathe new life into spaces and places that have a history and existing character but which, because of social or economic pressure, fashion, or simply change of ownership, require a new existence and identity. In order to achieve this transformation the designer must understand the contribution that history has provided and use this to create a design

### Battersea Power Station (right)

Location: London, UK

Date: 2008 (projected)

Designer: Universal Design  
Studio

The industrial past and present of this prime London location provides the designer with an entirely different set of constraints. The surrounding site is as much an issue to consider in any design proposal, as the language and typology of the building itself. Interior architects need to pay close attention to the location in which a project sits, and research into any given site will yield information and material essential to the creation of a successful final scheme.

*Photograph courtesy of  
Universal Design Studio*



proposal that – as well as fulfilling the practical and aesthetic requirements of the design brief – understands, respects and engages in a dialogue with the existing building.

There are excellent reasons for employing old buildings in new situations rather than simply demolishing them and starting afresh. In the first place the materials and energy locked into an existing building comprise a form of financial and environmental value that would be expensive to replace. But, perhaps as important, their use enriches our experience by creating a tangible link between the past, present and future.

Within existing buildings there is always evidence of the forms, materials, craftsmanship and details present at its construction, as well as the additions and alterations that have accrued over time. These create a richness and vibrancy with which the designer can work in the creation of the design scheme. The form and proportions of space, the shape and positioning of windows, the surfaces created by materials and structures all contribute to what is sometimes referred to as the *genius loci* – the spirit of the place. It is the interior architect's responsibility to recognise that spirit and to use the qualities and opportunities that it offers.

# the fundamentals of interior architecture

## SPACE/form

### building reuse

Employing existing buildings will almost inevitably involve work on the **structure** and **fabric** of that building; to stabilise it, improve it or prepare it for its new purpose. This work may be categorised in one of four ways:

Preservation fixes the building in its found state, making no attempt to repair or improve it but ensuring that, so far as such a thing is possible, it is immune from further decay. This could well be an appropriate response to an important building where it would be historically unacceptable to attempt to return it to its original state but where, without such preservation work, the effects of time and weather would result in its ultimate destruction.

Restoration returns the building to its as-built state using period materials and techniques to create the illusion that it has been untouched by time. It should be said that this is a contentious activity, there being a fine line between restoring a building and creating a pastiche.

Renovation renews and updates the building to make it suitable for contemporary life, perhaps by incorporating a modern bathroom, kitchen or heating system. Renovation work implies that there will be no major change of function or form.

Remodelling (referred to as Adaptive Reuse in America) locates an entirely new **function** within an existing building, which may be substantially modified to accept that interjection. As described above it uses the cultural and material capital intrinsic to the building shell to make connections between the old and the new.

It is in the renovation and remodelling of buildings that the majority of interior architects will operate, but these categories are not mutually exclusive and may be used in conjunction with one another in different parts of the project. As an example, the remodelling of the Great Court at the British Museum undertaken by Foster & Partners involved not only a re-skinning of the Reading Room and the creation of the new roof, but also restoration of the existing internal **façades** to remedy years of neglect and misuse.

### structure

The arrangements of the various parts of something and often referred to in architecture as the assembled or constructed parts of a building.

### fabric

The main 'body' of a building – usually the walls, floor and ceiling.

### function

The practical use or purpose of a design.

### façade

The exterior planes on the front of a building.

### Carlo Scarpa (Italy)

1906–1978

Notable projects:

Castelvecchio Museum, Verona, Italy

Brion-Vega Cemetery, San Vito d'Altivole, Italy

Carlo Scarpa is well known for his deep understanding of raw materials, architectural technique and the history of Venetian art. He resisted the attempts of other twentieth-century architects to strip building methods down to their most functional and simple.

His work has become an inspiration to many architects/designers wishing to revive craft and luxurious materials in a contemporary fashion. Scarpa taught drawing and interior decoration until the late 1970s and, though most of his work is based in northern Italy, he designed buildings, landscapes and gardens as far afield as the USA, Canada and Saudi Arabia. He took much of his inspiration for a project from the existing building so his work was often a long process of archaeology, analysis and construction.



**Barbican Tower Apartment, view of bedroom (above)**

Location: London, UK

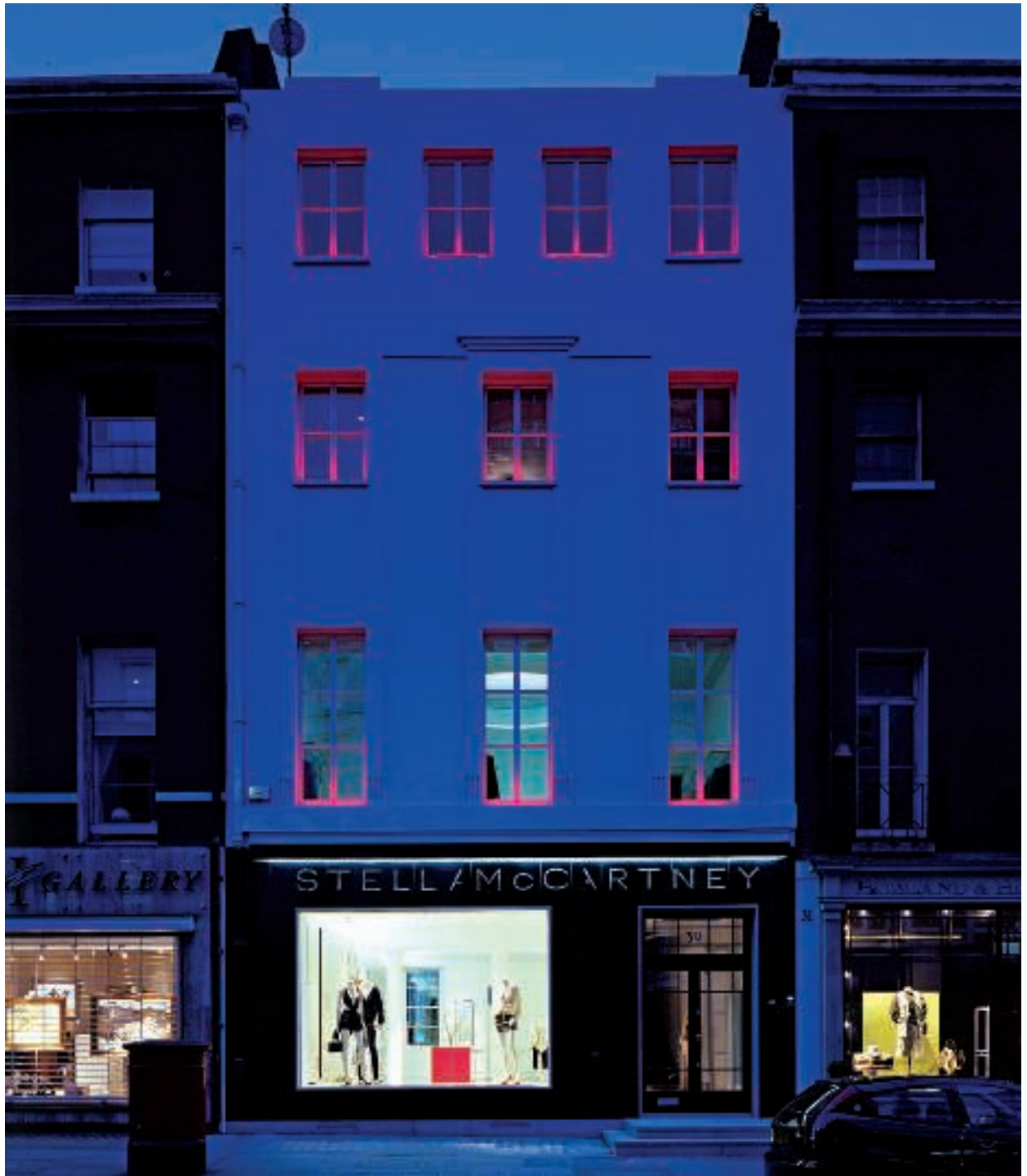
Date: 2004

Designer: Nick Coombe

The long, flush-mounted wall mirror in this Barbican apartment bedroom reflects the spatial context within which the scheme sits, offering a panoramic view of the city. The urban location of this apartment has been celebrated in its interior, which is bright and hard-edged.

*Photograph by James Morris <[www.jamesmorris.info](http://www.jamesmorris.info)>, provided courtesy of Nick Coombe*

the fundamentals of interior architecture  
**SPACE/form**



Chapter 1 / SPACE/form

'All over the world, buildings that have been recycled from an earlier function to a new one seem to serve their users better today than they ever did before...'

Peter Blake

**Stella McCartney UK flagship store, interior view (right)**

Location: London, UK

Date: 2002

Designer: Universal Design Studio

The natural light that floods this interior enters the building through tall openings in the façade. These door/windows were a feature of the building when it was originally constructed, and have been used to their full-effect in this contemporary remodelling – note the lack of screening, which ensures maximum daylight penetration to illuminate the clothing on sale.

*Photograph by Richard Davies, provided courtesy of Universal Design Studio*

**Stella McCartney flagship store, exterior view (facing page)**

Location: London, UK

Date: 2002

Designer: Universal Design Studio

Interior architects work with a range of building typologies that establish a number of useful design constraints. The property that houses Stella McCartney's London flagship store perfectly sets the scene for her collection, drawing on its bourgeois history to inform the scheme.

*Photograph by Richard Davies, provided courtesy of Universal Design Studio*





the fundamentals of interior architecture

**SPACE/form**

questions in summary  
**space & place**

1 2

How do we perceive  
the spaces that we  
occupy and use?

What makes a  
space a place?

3

**What is the role of the interior architect?**

4

**How does the interior architect transform and repurpose a space?**

5

**How might the existing internal structure influence the way the interior architect works with the interior?**



- [download The Counter Terrorism Handbook: Tactics, Procedures, and Techniques \(Practical Aspects of Criminal and Forensic Investigations\) pdf](#)
- [click \*The Geographical Unconscious\*](#)
- [\*\*The Routledge Handbook of Events \(Routledge Handbooks\) online\*\*](#)
- [Living within Limits: Ecology, Economics, and Population Taboos book](#)
  
- <http://growingsomeroots.com/ebooks/The-Counter-Terrorism-Handbook--Tactics--Procedures--and-Techniques--Practical-Aspects-of-Criminal-and-Forensic->
- <http://cambridgebrass.com/?freebooks/Metaphor-and-Diaspora-in-Contemporary-Writing.pdf>
- <http://patrickvincitore.com/?ebooks/The-Routledge-Handbook-of-Events--Routledge-Handbooks-.pdf>
- <http://dadhoc.com/lib/Living-within-Limits--Ecology--Economics--and-Population-Taboos.pdf>